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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Haochuan Jiang

154421CT

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23413

7590

05/30/2006

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EXAMINER

BOOSALIS, FANI POLYZOS

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,863

Applicant(s)

JIANG ET AL.

Examiner

Faye Boosalis

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-8, 10, 12-15, 18-19, 21, 23, 25-27, 30-31 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by *Venkataramani et al* (US 6,519,313 B2).

Regarding claim 1, Venkataramani discloses a scintillator array (12) for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59).

Regarding claim 2, Venkataramani discloses a scintillator array (12) wherein the projecting elements are constructed from a ceramic (col. 5, lines 37-47).

Regarding claim 3, Venkataramani discloses a scintillator array (12) wherein the glass compound comprises a fluoride glass (col. 5, lines 37-47).

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Regarding claim 4, Venkataramani discloses the scintillator array comprising the same elements and glass compound, as stated supra, and therefore is inherent the glass compound would have a reflective index less than or equal to 1.6.

Regarding claim 7, Venkataramani discloses the scintillator array (12) wherein the reflective particles (18) comprise TiO_2 particles (col. 4, lines 26-31).

Regarding claim 8, Venkataramani discloses the scintillator array (12) wherein the reflective particles (18) comprise gadolinium oxy particles (col. 4, lines 18-25).

Regarding claim 10, Venkataramani discloses the scintillator array (12) wherein the glass compound contains a light absorber compound (col. 2, lines 45-49).

Regarding claim 12, Venkataramani discloses a method for manufacturing a scintillator array for use in a CT imaging system (100), comprising: mixing a plurality of glass particles with a plurality of reflective particles in a fluid to obtain a mixture (col. 5, lines 38-57); coating a plurality of projecting elements disposed proximate one another with the mixture (col. 7, lines 31-33) applying a pressure to the plurality of projecting elements an to the mixture; and heating the plurality of projecting elements and the mixture to a predetermined temperature to form the scintillator array (col. 7, lines 33-39).

Regarding claim 13, Venkataramani discloses a method wherein the projecting elements are constructed from a ceramic (col. 5, lines 37-47).

Regarding claim 14, Venkataramani discloses a method wherein the glass compound comprises a fluoride glass (col. 5, lines 37-47).

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Regarding claim 15, discloses a method for manufacturing a scintillator array for use in a CT imaging system (100), comprising the same elements and glass compound, as stated supra, and therefore is inherent the glass compound would have a reflective index less than or equal to 1.6.

Regarding claim 18, Venkataramani discloses a method wherein the reflective particles (18) comprise TiO_2 particles (col. 4, lines 26-31).

Regarding claim 19, Venkataramani discloses a method wherein the reflective particles (18) comprise gadolinium oxy particles (col. 4, lines 18-25).

Regarding claim 21, Venkataramani discloses a method wherein the glass compound contains a light absorber compound (col. 2, lines 45-49).

Regarding claim 23, Venkataramani discloses a detector module for use in a CT imaging system (100), comprising: a scintillator array (12) having a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12) and a glass compound (16) disposed on the plurality of projecting elements (12a)(12b)(12c) (col. 2, lines 45-49), the glass compound containing a plurality of reflective particles, wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59); and a photodiode array configured to receive light emitted from the scintillator array and to generate electrical signals responsive thereto (col. 5, lines 58-64 and col. 6, lines 61-64).

Regarding claim 25, Venkataramani discloses a detector module wherein the projecting elements are constructed from a ceramic (col. 5, lines 37-47).

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Regarding claim 26, Venkataramani discloses a detector module wherein the glass compound comprises a fluoride glass (col. 5, lines 37-47).

Regarding claim 27, discloses a detector module comprising the same elements and glass compound, as stated supra, and therefore is inherent the glass compound would have a reflective index less than or equal to 1.6.

Regarding claim 30, Venkataramani discloses a detector module wherein the reflective particles (18) comprise TiO₂ particles (col. 4, lines 26-31).

Regarding claim 31, Venkataramani discloses a detector module wherein the reflective particles (18) comprise gadolinium oxy particles (col. 4, lines 18-25).

Regarding claim 33, Venkataramani discloses a detector module wherein the glass compound contains a light absorber compound (col. 2, lines 45-49).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2).

Regarding claim 5, Venkataramani discloses a scintillator array (12) for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the

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plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59).

Although Venkataramani does not disclose of a Chloride element, it well known that Chloride reduces melting temperatures and therefore would be obvious to include Chloride in the glass compound, to reduce melting temperature of the glass, and reduce system's image sensitivity to errors.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 1 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 6, Venkataramani discloses a scintillator array (12) for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59).

Venkataramani does not disclose reflective particles micron range in diameter.

Although Riedner does not specifically disclose of the total reflective particle microns in diameter he does disclose wherein the thickness in range of the reflective material is between 10-160 micrometers in diameter. Therefore, the total range of the reflective material would fall within the 100-300 micron range of all of the reflective particles in diameter (col. 2, lines 53-58). Riedner teaches to increase the spatial resolution and the strength of a signal applied to a photodiode located adjacent one of scintillator

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elements, gaps are filled with a reflective material. The width of gaps may range from about 10-60 micrometers (col. 2, lines 53-58). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani, to include reflective particles in a range of 100-300 microns in diameter, as disclosed supra by Riedner, to allow for a more effective scintillation array used in CT imaging systems.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 1 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 9, Venkataramani discloses a scintillator array (12) for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59). Venkataramani does not disclose the percent of volume of reflective particles in the glass compound. Riedner discloses a scintillator array used in a CT system wherein between 20-60 percent of a volume of the glass compound comprises the reflective particles (col. 2, lines 66-67). Riedner teaches scintillator elements laid out as an array having gaps between the adjacent elements wherein the gaps are filled with a composition containing a white, highly diffuse reflective material including titanium dioxide, including about 20-70 % by weight of TiO₂, and a castable epoxy. The composition minimizes the amount of light that is reflected out of the element and

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increases the strength of the signal transmitted to a photodiode located adjacent the scintillator element (col. 2, lines 63-67, col. 3, line 1 and col. 4, lines 37-33). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani to include between 20-60 % of reflective particle volume in the glass compound, as disclosed supra by Riedner, to allow for more efficient scintillation used in the CT imaging system.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 10 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 11, Venkataramani discloses a scintillator array (12) for use in a CT system, wherein the glass compound contains a light absorber compound (col. 2, lines 45-49). Venkataramani does not disclose the absorber compound comprising Cr_2O_3 . Riedner discloses a scintillator array used in a CT system wherein an absorber compound comprises Cr_2O_3 (col. 3, lines 1-4). Riedner teaches light absorber for example, chromium oxide Cr_2O_3 can be added to the composition to reduce crosstalk between scintillator elements (col. 3, lines 1-4). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani, to include a Cr_2O_3 absorber compound, as disclosed supra by Riedner, to allow for a more effective scintillator array for use in a CT imaging system.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2).

Regarding claim 16, Venkataramani discloses a method for manufacturing a scintillator array for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59). Although Venkataramani does not disclose of a Chloride element, it well known that Chloride reduces melting temperatures and therefore would be obvious to include Chloride in the glass compound, to reduce melting temperature of the glass, and reduce system's image sensitivity to errors.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 12 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 17, Venkataramani discloses a method for manufacturing a scintillator array for use in a CT imaging system (100), comprising: mixing a plurality of glass particles with a plurality of reflective particles in a fluid to obtain a mixture (col. 5, lines 38-57); coating a plurality of projecting elements disposed proximate one another with the mixture (col. 7, lines 31-33) applying a pressure to the plurality of projecting elements an to the mixture; and heating the plurality of projecting elements and the mixture to a predetermined temperature to form the scintillator array (col. 7, lines 33-39). Venkataramani does not disclose reflective particles micron range in diameter. Although Riedner does not specifically disclose of the total reflective particle microns in

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diameter he does disclose wherein the thickness in range of the reflective material is between 10-160 micrometers in diameter. Therefore, the total range of the reflective material would fall within the 100-300 micron range of all of the reflective particles in diameter (col. 2, lines 53-58). Riedner teaches to increase the spatial resolution and the strength of a signal applied to a photodiode located adjacent one of scintillator elements, gaps are filled with a reflective material. The width of gaps may range from about 10-60 micrometers (col. 2, lines 53-58). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani, to include reflective particles in a range of 100-300 microns in diameter, as disclosed supra by Riedner, to allow for a more effective means for manufacturing scintillation array used in CT imaging systems.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 12 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 20, Venkataramani discloses a method for manufacturing a scintillator array for use in a CT imaging system (100), comprising: mixing a plurality of glass particles with a plurality of reflective particles in a fluid to obtain a mixture (col. 5, lines 38-57); coating a plurality of projecting elements disposed proximate one another with the mixture (col. 7, lines 31-33) applying a pressure to the plurality of projecting elements an to the mixture; and heating the plurality of projecting elements and the mixture to a predetermined temperature to form the scintillator array (col. 7, lines 33-39). Venkataramani does not disclose the percent of volume of reflective particles in the glass compound. Riedner discloses a method for manufacturing a scintillator array

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for use in a CT imaging system wherein between 20-60 percent of a volume of the glass compound comprises the reflective particles (col. 2, lines 66-67). Riedner teaches scintillator elements laid out as an array having gaps between the adjacent elements wherein the gaps are filled with a composition containing a white, highly diffuse reflective material including titanium dioxide, including about 20-70 % by weight of TiO_2 , and a castable epoxy. The composition minimizes the amount of light that is reflected out of the element and increases the strength of the signal transmitted to a photodiode located adjacent the scintillator element (col. 2, lines 63-67, col. 3, line 1 and col. 4, lines 37-33). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani to include between 20-60 % of reflective particle volume in the glass compound, as disclosed supra by Riedner, to allow for a more effective means of manufacturing a scintillator array for use in a CT imaging system.

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 21 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 22, Venkataramani discloses a method wherein the glass compound contains a light absorber compound (col. 2, lines 45-49). Venkataramani does not disclose the absorber compound comprising Cr_2O_3 . Riedner discloses a method for manufacturing a scintillator array for use in a CT imaging system, wherein an absorber compound comprises Cr_2O_3 (col. 3, lines 1-4). Riedner teaches light absorber fore example, chromium oxide Cr_2O_3 can be added to the composition to reduce crosstalk between scintillator elements (col. 3, lines 1-4). Therefore, it would

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have been obvious to modify the scintillator array disclosed by Venkataramani, to include a Cr_2O_3 absorber compound, as disclosed supra by Riedner, to allow for a more effective means of manufacturing a scintillator array for use in a CT imaging system.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 23 above, and further in view of *Schaefer et al* (US 6,091,795 A).

Regarding claim 24, Venkataramani discloses a detector module for use in a CT imaging system (100), comprising: a scintillator array (12) having a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12) and a glass compound (16) disposed on the plurality of projecting elements (12a)(12b)(12c) (col. 2, lines 45-49), the glass compound containing a plurality of reflective particles, wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59); and a photodiode array configured to receive light emitted from the scintillator array and to generate electrical signals responsive thereto (col. 5, lines 58-64 and col. 6, lines 61-64). Venkataramani does not disclose a ceramic substrate. Schaefer discloses area detector array for use in a CT system wherein a ceramic substrate (12) is coupled to the photodiode array (14) (col. 6, lines 15-23 and col. 7, lines 52-59). Schaefer teaches the substrate can be made of any structural material which is suitable for supporting the photodiode and scintillator crystal array, as well as the electrical interconnect layer and signal transmission means. Suitable materials for the substrate include, for example, plastic, glass, fiberglass and ceramic (col. 7, lines 52-57). Therefore, it would have been obvious to modify the CT imaging

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system disclosed by Venkataramani, to include a ceramic substrate, as disclosed supra by Schaefer, to allow for a more effective CT imaging system.

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2).

Regarding claim 28, Venkataramani discloses a detector module for use in a CT imaging system (100), comprising: a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12); and a glass compound (16) (col. 2, lines 45-49) containing a plurality of reflective particles (18) being disposed on the plurality of projecting elements (12a)(12b)(12c), wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59). Although Venkataramani does not disclose of a Chloride element, it well known that Chloride reduces melting temperatures and therefore would be obvious to include Chloride in the glass compound, to reduce melting temperature of the glass, and reduce system's image sensitivity to errors.

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 23 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 29, Venkataramani discloses a detector module for use in a CT imaging system (100), comprising: a scintillator array (12) having a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12) and a glass compound (16) disposed on the plurality of projecting elements (12a)(12b)(12c) (col. 2, lines 45-49), the glass compound containing a plurality of reflective particles,

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wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59); and a photodiode array configured to receive light emitted from the scintillator array and to generate electrical signals responsive thereto (col. 5, lines 58-64 and col. 6, lines 61-64). Venkataramani does not disclose reflective particles micron range in diameter. Although Riedner does not specifically disclose of the total reflective particle microns in diameter he does disclose wherein the thickness in range of the reflective material is between 10-160 micrometers in diameter.

Therefore, the total range of the reflective material would fall within the 100-300 micron range of all of the reflective particles in diameter (col. 2, lines 53-58). Riedner teaches to increase the spatial resolution and the strength of a signal applied to a photodiode located adjacent one of scintillator elements, gaps are filled with a reflective material. The width of gaps may range from about 10-60 micrometers (col. 2, lines 53-58).

Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani, to include reflective particles in a range of 100-300 microns in diameter, as disclosed supra by Riedner, to allow for a more effective detector module for use in CT imaging systems.

15. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 23 above, and further in view of *Riedner et al* (US 6,344,649 B2).

Regarding claim 32, Venkataramani discloses a detector module for use in a CT imaging system (100), comprising: a scintillator array (12) having a plurality of projecting elements (12a)(12b)(12c) disposed proximate one another (col. 3, lines 5-12) and a

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glass compound (16) disposed on the plurality of projecting elements (12a)(12b)(12c) (col. 2, lines 45-49), the glass compound containing a plurality of reflective particles, wherein the projecting elements emit light in response to receiving x-rays (See Figs. 1, 3 and 4, and col. 3, lines 41-59); and a photodiode array configured to receive light emitted from the scintillator array and to generate electrical signals responsive thereto (col. 5, lines 58-64 and col. 6, lines 61-64). Venkataramani does not disclose the percent of volume of reflective particles in the glass compound. Riedner discloses a detector module for use in a CT imaging system wherein between 20-60 percent of a volume of the glass compound comprises the reflective particles (col. 2, lines 66-67). Riedner teaches scintillator elements laid out as an array having gaps between the adjacent elements wherein the gaps are filled with a composition containing a white, highly diffuse reflective material including titanium dioxide, including about 20-70 % by weight of TiO₂, and a castable epoxy. The composition minimizes the amount of light that is reflected out of the element and increases the strength of the signal transmitted to a photodiode located adjacent the scintillator element (col. 2, lines 63-67, col. 3, line 1 and col. 4, lines 37-33). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani to include between 20-60 % of reflective particle volume in the glass compound, as disclosed supra by Riedner, to allow for more efficient scintillation used in the CT imaging system.

16. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Venkataramani et al* (US 6,519,313 B2) as applied to claim 33 above, and further in view of *Riedner et al* (US 6,344,649 B2).

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Regarding claim 34, Venkataramani discloses a detector module wherein the glass compound contains a light absorber compound (col. 2, lines 45-49).

Venkataramani does not disclose the absorber compound comprising Cr_2O_3 . Riedner discloses a method for manufacturing a scintillator array for use in a CT imaging system, wherein an absorber compound comprises Cr_2O_3 (col. 3, lines 1-4). Riedner teaches light absorber for example, chromium oxide Cr_2O_3 can be added to the composition to reduce crosstalk between scintillator elements (col. 3, lines 1-4). Therefore, it would have been obvious to modify the scintillator array disclosed by Venkataramani, to include a Cr_2O_3 absorber compound, as disclosed supra by Riedner, to allow for a more effective detector module for use in a CT imaging system.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FB


OTILIA GABOR
PRIMARY EXAMINER